

Tuolumne County's Deteriorating Roads



Photo credit Mark Massman

Summary

The 2017-2018 Tuolumne County Grand Jury found that, in general, the important Major Arterials and Minor Arterials and Major Collectors are in *good* condition. We also found that, in general, the rest of the County roads (Minor Collectors and Local Roads) are in very *poor* condition. We determined that this is due to overall lack of funding for road maintenance and that the State and County policies give priority to Major Arterials, Minor Arterials, and Major Collectors.

Our investigation discovered a public perception of misuse of funding. Some members of the public believe that funding for road maintenance is being diverted to other uses within the County. We found no substance to support this view.

In reviewing County implementation of the Pavement Condition Survey (PCI) process, we found that this process was being diligently followed for all roads within County responsibility such that the actual condition of roads was thoroughly known, tracked, and documented.

The Grand Jury also noted that many Minor Collector and Local Roads were built to varying design and construction standards

adopted in multiple historical time periods as far back as 1871. As a result, many of the oldest roads may require reconstruction.

Finally, our investigation looked at two possible funding mechanisms for road maintenance, a County sales tax and the expansion of the current Community Service Assessment process used in some communities. Our recommendation is that pursuit of a sales tax program specifically for maintenance of Minor Collectors and Local Roads is the most viable option for Tuolumne County and the City of Sonora.

Background

The 2017-2018 Tuolumne County Grand Jury investigated road maintenance for several reasons:

- The Grand Jury received public complaints about the deterioration of public roads, including concerns that road funding was being diverted for other County needs.
- The passage in early 2017 of California Senate Bill 1 (SB1) is a new statewide funding source. This gas tax increase, which includes significant new funding for road maintenance and safety improvements, includes funds for both cities and counties, and has the potential to positively impact this issue.
- It has been over a decade since the Grand Jury has investigated any aspect of public works within the Tuolumne County Community Resources Agency.

Methodology

In the course of this investigation, the Grand Jury conducted interviews and reviewed documents as listed below.

Interviews

The Grand Jury interviewed 10 individuals representing Tuolumne County residents, Tuolumne County management, City of Sonora management, State and County Audit, and the Tuolumne County Community Resources Agency.

Documents

- 2018 Tuolumne County State of the Roads Report
- 2018 Accounting Report on Organizational Budgets including Public Works Administration, Road Maintenance, Special Districts, and SB1 Transportation Funding
- February 5, 2018 Letter from County Counsel on Roads in Tuolumne County
- April 3, 2018 Union Democrat Article on Road Deterioration
- 2017-2018 Tuolumne County Budget for Road Maintenance
- 2017-2018 Tuolumne County Budget for Road Construction Fund
- California Transportation Commission Information on Senate Bill 1 (Road Repair and Accountability Act of 2017)
- September 20, 2017 Union Democrat Article on Lack of Road Repair Funds
- 2017 Tuolumne County Road Report to the State Controller
- 2017-2018 Annual Budgets for Road Construction and Road Maintenance

- 2017 Tuolumne County Board of Supervisor Agenda Item on SB1 Use
- November 17, 2017 CRA Letter to the Board of Supervisors on Traffic Mitigation Fees
- November 17, 2017 CRA Letter to the Board of Supervisors on Tribal Road Mitigation Fees
- 2015-2016 Tuolumne County Definition of Road Fund Organization Structure
- April 12, 2016 Tuolumne County Community Resources Agency submittal of request for State review of Indirect Cost Rates for use on road projects
- May 10, 2016 Letter from State of California Department of Transportation Audit approval letter for Tuolumne County Community Resources Agency Road Fund Indirect Cost Rate Proposal
- September 9, 2016 Letter from Supervising Engineer to County Board of Supervisors on Modification of Pavement Condition Index Goals
- August 2015 State of California Guidelines Relating to Gas Tax Expenditures for Cities and Counties
- 2014 Tuolumne County State of the Roads Report and 2016 Update
- 2012 Pavement Management Systems Update
- 2011-2012 Tuolumne County Report Status Report on Road Maintenance
- Title 11 Road Standards
- Resolution 20 Road Standards

- 2005 Tuolumne County Public Opinion Survey Results
- Tuolumne County General Plan Circulation Element
- Tuolumne County Board of Supervisors Resolutions 282-87, 287-89, 86-07, 107-09, and 31-13 on Subdivision responsibility for Road Maintenance
- Self Help Counties Coalition Website (www.selfhelpcounties.org)

Discussion

Scope of Discussion

The scope of this investigation and report relates mainly to roads for which the County of Tuolumne has maintenance responsibility. However, the issue of lack of funding for road maintenance also applies to the City of Sonora and is discussed as needed. The road distances are as follows:

- Tuolumne County Roads – 610 miles (520 miles of which are paved) as per the Tuolumne County General Plan
- City of Sonora Roads – 27.5 miles as defined in the City General Plan

A County Grand Jury does not, in general, have authority to investigate Federal, State, or private concerns. It is important to note, however, that there are significant miles of roads within Tuolumne County that are owned and operated by Federal, State, and Private Concerns as listed in the table below (approximate distances).

Type of Road	Miles of Roads
U.S. Forest Service	2200-2500
State of California	145
Private (with or without public rights)	1200-1500
Tribal Trust Land	7.3

Definition of Roads for which the City of Sonora and the County of Tuolumne have maintenance responsibilities

Throughout the long history of Tuolumne County and the City of Sonora, roads have been built by diverse entities, including mining and logging interests, Federal and State government, individuals and private companies, subdivision developers, as well as by the City and County. Ownership of roads brings with it liability and economic responsibilities, as well as operations and maintenance responsibility. Over time, segments of these roads change hands through agreements between owners.

Typically, when the City or County builds a road for public use, it retains ownership of the facility and the responsibility for operation and maintenance. When a road is built by private interests (typically developers) within City or County boundaries, the City or County has the right to accept or not accept the responsibility for maintenance. In some instances, private entities have requested the City or County perform maintenance under contract. Roads in Tuolumne County have been built to different standards. The City and County have maintenance responsibility for the following road classifications:

- Roads built by the County and City for public use and for which they retain operations and maintenance responsibility
- Roads (or portions thereof) previously built by other public agencies for which ownership has been transferred to City or

County. An example of this would be the portion of Washington Street in Sonora which was previously part of California Highway 108. Due to the relocation of Highway 108, it is now in City and/or County jurisdiction.

- Roads built as part of the subdivision process that were built by private interests, but for which the City or County has chosen to accept maintenance and operations responsibility.
- Roads built as part of the subdivision process that were built by private interests but for which the City or County has chosen to accept maintenance and operations responsibility subject to funding being provided by the subdivision community.

While road maintenance in most subdivision communities is the responsibility of the County, please note that there are roads in subdivision communities for which the County has not accepted operations and maintenance responsibility, due to the community *not* agreeing to provide funding. There are also communities that are funding and providing road maintenance without assistance from the City or County.

History of Road Standards in Tuolumne County

Road standards are adopted by the City and County for use in the design and construction of roads. For subdivision developers or private property owners, road standards are, and have been, used as criteria to determine whether the subdivision can be approved and whether the planned project may be eligible for incorporation into the County or City system for operations and maintenance. Tuolumne County's first road standard (Resolution 52) was adopted in 1948, updated by Resolution 20 in 1964, and followed by Title 11 in 1987. There have been subsequent amendments to Title 11.

Road standards cover many aspects of road design and construction such as slope, curves radii, and cross slope as well as defining the level of traffic and vehicle weight that the road can support. Most important to long term maintenance include design of the drainage system, underlying road base (important to the strength of a road), and

wearing surfacing (asphalt or concrete), as well as enforcement of traffic volume and weight ratings.

Our investigation discovered that many roads in the County built prior to 1948 were not built to any known standards. As a result, it is unknown how much effort may be required for maintenance.

Classification of Roads

For the purposes of our investigation, the Grand Jury adopted the Tuolumne County General Plan in categorizing roads. These categories are as follows:

- Minor Arterial Roads (15.8 miles) – High speed, high volume travel corridors for movement between traffic generators such as cities, large towns and resort areas and uninterrupted intercounty travel. These roads include Mono Way and La Grange Road (J59).
- Major Collector Roads (86.3 miles) – Corridors for through traffic within local areas providing service to towns and other major traffic generators within the County which are not directly served by the arterial system. These roads include Parrotts Ferry Road and Tuolumne Road.
- Minor Collector Roads (104.6 miles) – Routes generally serving lower density areas to funnel traffic from groups of local roads onto the major collectors and arterial routes. These roads include Dodge Ridge Road and Wards Ferry Road.
- Local Roads (403.7 miles) – Routes providing direct access to residential property and other areas which are not directly served by the collector or arterial system.

In addition, two common road types for which the County is *not* generally responsible include:

Private Roads:

A purely private road is one that only private owners can access. This is because access is limited by locked gates or fencing. There are a

number of “gated” subdivision communities that have been built in the County, including Pine Mountain Lake and Black Jack Bluffs. Maintenance of private roads is the responsibility of the private owners.

Private Public Roads:

There are many miles of roads that are privately owned, but for which the public has right of access and use. This occurs either intentionally (such as a subdivision) or unintentionally (where the public has used the road for such a long time, such as for access to private property, that the courts have ruled that the public has right of access and use). Public right of access and use does *not* mean that the City or County is responsible for the design, operations, or maintenance of the road or the associated liability, unless the City or County formally agrees to such an arrangement. For this reason, we are careful in this report to not use the term “public road” and will use the terms for roads as listed above.

Road Testing Standards

Standardized processes exist for monitoring, testing, and evaluating the condition of existing roads. These processes are useful for County and City engineers, and are also required for State and Federal funding eligibility. County staff perform regular inspection and testing (upwards of 600 inspections in a given year). Inspections are made of Minor Arterials annually, Major and Minor Collectors every two years, and Local Roads every four years. These inspections are reported to the Board of Supervisors and to Caltrans.

Road conditions in Tuolumne County and the City of Sonora and rate of deterioration are known. The Road Pavement Condition Index (PCI) compiles inspection and testing data using a simplistic scoring and reporting 0 to 100 point format to rate road conditions as follows:

Point Total	Road Rating
0 - 25	Very Poor
25 - 50	Poor
50 - 70	Fair
70 – 100	Good To Excellent

The 2018 Tuolumne County PCI report indicated the following PCI data and Board of Supervisors (BOS) approved goals:

Type of Road	Actual Average PCI	BOS Goal Average PCI	% of Network
Arterial	77	70	5
Major Collectors	53	50	19
Minor Collectors	31	50	20
Local Roads	22-32	TBD	56

Based on the 2018 report, 76% of County roads are in Poor to Very Poor condition. That report also stated that *“with the network PCI average of 33, in order to maintain a roadway network in a “good state of repair”, the County needs \$217.5 million over the next twenty years (\$10.9 million per year). This amount is only for pavement and not the 54 bridges, culverts, traffic signals, street signs, etc. that are a part of the County’s assets which are maintained.”*

County “State of the Roads” Reporting

Residents of Tuolumne County frequently complain about the roads deteriorating in some communities more than others. The State Highways, Arterials, and Major collectors, for example, are in better condition than the Minor Collectors, and Local Roads.

The condition of all of the City and County roads is well known and tracked. This is due to the County and City utilization of the PCI process as explained in the previous section. The Road Supervisor delivers a State of the Roads report to the Board of Supervisors on an annual basis.

According to the 2014 State of the Roads, and its 2016 update, the average PCI of Tuolumne County roads is only 41 out of 100. In contrast, the average for other counties in California is 58 out of 100. An all-inclusive survey of *all* California roads shows a PCI of 66 out of 100.

We also discovered that Tuolumne County road conditions are forecast to deteriorate quickly. Given current funding levels for road maintenance (including the new SB1 funds), the Roads Report forecasts that the PCI will drop to 19 in the next 20 years.

Road Maintenance

Definition of Maintenance:

Road maintenance covers a wide range of elements including clearing drains, replacement signage and striping, asphalt patching and resurfacing, guardrail replacement, signal operation, weed abatement, snowplowing, etc. Major cost elements in road maintenance include clearing of drains, localized re-compaction of base, and asphalt removal and replacement, all of which are the major components of current deterioration concern.

Maintenance Organization and Contracting:

Current maintenance efforts in Tuolumne County consist of three crews of County employees covering four regions. The three crews

currently consist of 20 people total. In the past there have been as many as four crews consisting of 40 people covering the four regions. The smaller crews make it much harder to keep up with the work load. The larger construction jobs are contracted out

Public Concerns Regarding Diversion of Road Funding

One reason for our investigation was a public perception that funding for roads was being diverted. However, the Grand Jury found that that Roads Maintenance funds are *not* being diverted. We studied the funding for the 2017/18 fiscal year and found:

The primary 2017-2018 funding sources for Tuolumne County road maintenance are:

- \$3.6 million in gas tax revenue from multiple programs, which includes \$923 thousand in initial partial year funding from SB1.
- \$1.2 million Federal Revenue (multiple programs including the Tuolumne Band of Me-Wuk Tribal Fund).
- \$254,000 in charges to private entities for County provided road services.

All of these funds are put into a segregated Road Fund which is audited every two years by the State on behalf of State and Federal interests. All funding for construction projects comes from State and Federal grant funding and is not intermingled with maintenance funding.

No County General Funds are utilized for road maintenance. A review of recent County budgets identified one instance where there was a loan from the Road Fund to the County General Fund that was being repaid to the Road Fund.

There is a long-established State/Federal system of allowed loading of “indirect” personnel costs (such as legal, administrative, human resources, etc.) onto the “direct” personnel costs incurred for road work utilizing State and Federal funds. These indirect overhead rates (a percentage of an hour of direct cost for County road department

employees including maintenance) are reviewed and approved annually by the State. The current indirect overhead percentage for Tuolumne County is 24.33 percent. This rate is low in comparison to the other 57 counties in California. This overhead rate is only applied to work performed by County employees, as is the case for road maintenance.

Minor Collectors and Local Roads are the Major Unfunded Problem

Per the previous classifications of roads, most of the road mileage is in the Minor Collector and Local Road categories. These roads are primarily related to, or within, subdivisions. With the assistance of the County Surveyor and County Roads Engineer, the Grand Jury was able to assemble a spreadsheet identifying all of the subdivisions in the County. A summary of this spreadsheet is as follows:

From the year 1871 to today:

- 510 subdivision maps have been recorded within Tuolumne County
- 71 of those maps were filed prior to adoption of the 1952 (and subsequent) road construction standards
- 131 (approximately) have been recorded, placing responsibility for road maintenance funding, either intentionally on private subdivisions such as Pine Mountain Lake or as required by a 1987 ordinance and subsequent County amendments. Most of these communities collect funds through the property tax process or as a Home Owner Association (HOA). The County retains these funds in special district accounts for use only in the District. Actual work may be performed by either the County or the District.
- Only 21 of the 107 non-private subdivisions with responsibility for funding road maintenance are actually doing so.

In summary, the main reasons we discovered for deteriorating roads throughout the County vary. However, we have identified the following contributors:

- General lack of funding
- County policy giving maintenance funding priority to Arterials and Major Collectors
- State and Federal funding comes with policies requiring attention be placed upon the major roads as well as giving priority to other safety concerns.
- Road Construction Standards (or lack thereof) in many older communities, such as Columbia, Twain Harte, and Tuolumne which were built prior to modern road standards.
- Roads being used for higher traffic or truck loading than originally designed.
- Subdivisions that were approved by County subject to the requirement that the subdivision property owners fund road maintenance - but are not.

Road Maintenance Funding Sources

In looking at future funding sources for road maintenance and repair beginning in the 2018/19 fiscal year, the Grand Jury identified the following:

State and Federal Gas Taxes:

Gas taxes are currently generating approximately \$9 million in funding for road maintenance and safety, including the anticipated \$4 million per year from SB1.

Fees Collected by Tuolumne County:

The County collects traffic mitigation fees from a variety of sources. Approximately \$382,000 are collected per year, including fees collected from the Tuolumne Band of Me-Wuk Indians.

Road Maintenance Fees Collected from Community Service Areas:

Collectively, 37 Community Service Areas generate approximately \$466,000 yearly. By 1987 Tuolumne County realized that its previous

practice of accepting new subdivision roads into the County system for operations and maintenance had reached a point where available funding was inadequate to continue this practice. The County adopted Resolution 282-87 which required, as a condition of subdivision map approval, each new subdivision permanently assume the responsibility for funding road maintenance through the creation of Community Service Agreements. This system has remained in place with several subsequent modifying resolutions (287-89, 86-07, 107-09, and 31-13).

Funding Sources Not Currently Being Used

In our investigation, we also noted that sale taxes for the County of Tuolumne and the City of Sonora are *not* currently used for road maintenance and repair. Since 1985 many successful sales tax programs in the State of California have been in the area of incremental sales taxes for transportation (primarily roads) at the County level. Passage of sales taxes is difficult as court rulings have limited passage to receiving a greater than two-thirds (66.67%) positive public vote.

Our review of the Self-Help Counties Coalition website shows that, to date, there have been 24 Counties successfully passing sales tax programs for transportation including: Sonoma, Napa, San Francisco, San Mateo, Santa Cruz, Monterey, Sacramento, San Joaquin, Contra Costa, Alameda, Santa Clara, Stanislaus, Merced, Madera, Fresno, Tulare, Santa Barbara, Los Angeles, San Bernardino, Orange, Riverside, San Diego, and Imperial Counties.

The key elements of achieving successful voter support for these programs have been:

- Tax program is for a fixed period (sunsets), usually 10 or 20 years.
- Proposed program commits to accomplish a very specific set of projects.
- Proposed program commits to an audited maintenance-of-effort provision (that funds currently being spent on transportation continue to be spent on transportation).

- Return to Source policy or structure that assures that individual communities or regions receive funding proportional to their contribution to the tax (or other proportional formulae such as percent of population or percent of road miles).

Previous Survey on Public Ranking of Concern

Concerns over road conditions and ideas for funding solutions have existed for some time. In 2005, Tuolumne County retained a consultant to poll as to which issues the public would most support as part of a proposal to implement a sales tax funding program for Tuolumne County. The Public Ranking of Concern Survey requested responders rate five areas of consideration, including Roads and Streets, Parks and Recreation, Sheriff Services, Fire Protection Services, and Building a Juvenile Hall Facility, using a scale of 0 to 10 (10 being most needed). Our review of the base data shows that the sum of responders giving each topic a 5 or better resulted in the following ranking of the issue:

- Roads and Streets – 90.1%
- Fire Protection – 88.7%
- Sheriff Services – 86.8%
- Parks and Recreation – 78.0%
- Building a Juvenile Hall Facility – 66.6%

The Board of Supervisors, however, voted to proceed with a sales tax measure that included funding for Fire Protection and Sheriff Services. That ballot measure did not garner the necessary two-thirds vote and so failed.

Funding Options

Our review of funding options that could fully address the maintenance issue pointed towards, (1) a major expansion of the existing Community Service Agreement (CSA) system and (2) an incremental addition to the existing sales tax.

The CSA system is essentially a property tax which concentrates the tax burden on a limited portion of the road-using population. An expansion of the CSA system, which customizes funding levels to the specific needs of each community, including the issue of older roads not built to standards, would be problematic due to the large number of individual subdivisions.

- There are 463 non-private subdivisions currently without a CSA
- There are currently 376 non-private subdivisions for which the County is responsible for maintenance
- 107 non-private subdivisions are currently responsible for funding their road maintenance. Only 21 are currently doing so.

In addition, an expansion of the CSA system would also need to account for the issue of historic County responsibility for maintenance.

The sales tax approach would be simple to implement as an increment to the existing sales tax system. It would also spread the tax burden across the largest population (all County citizens as well as visitors). The Self-Help Counties Coalition has shown the way to gaining public support for such a program. One issue that would need to be addressed is the potential for double taxation on the 21 subdivisions with active CSA's.

Findings

- F1. Funding for road maintenance (including the new SB1 funds) remains inadequate to reverse the deterioration of the City and County system, particularly the Minor Collector and Local community roads. Current Tuolumne County funding for maintenance will be about \$9 million per year when fully receiving the new SB1 funds. An additional \$4 million per year for 20 years is needed to catch up for all roads.
- F2. The County uses a two-stage approach to allocation of available funds. Minor Arterials and Major Collectors are given first priority, followed by a screening process based on the

Pavement Condition Index process if there are any remaining funds.

- F3. Using the Pavement Condition Index (PCI) as the primary criteria to allocate funds for Minor Collectors and Local Roads is not a true Return to Source policy and disadvantages some communities over others. (Return to Source: a method for fairly and proportionally distributing a general tax back to the various communities of the County)
- F4. The oldest roads in the County (71 of 484 non-private subdivisions) were not built to known road standards for drainage, base, and asphalt topping, and generally require more maintenance than newer roads built to standards.
- F5. The County lacks adequate funding to maintain roads in the 375 non-private subdivisions for which it is responsible.
- F6. Of the 107 non-private subdivision with responsibility for funding of road maintenance, only 21 are currently doing so.

Recommendations

- R1. Tuolumne County continue to maintain priority for State and Federal maintenance funding (including SB1) on Minor Arterials and Major Collector Roads and extend where possible to Minor Collector Roads.
- R2. Tuolumne County and the City of Sonora to conduct a public discussion regarding a sales tax increment for Minor Collector and Local Roads, following the successful approach offered by the Self-Help Counties Coalition (the existing 24 county sales tax programs throughout the State of California).

Request For Responses

According to California Penal Code §933(c), no later than 90 days after the grand jury submits a final report on the operations of any public agency subject to the reviewing authority, the governing body of the public agency shall comment to the presiding judge of the superior court on the finding and recommendations pertaining to matters under the control of the governing body and every elected county office of agency head for which the grand jury has jurisdiction pursuant to §914 shall comment within 60 days to the presiding judge of the superior court.

The Tuolumne County Board of Supervisors are requested to respond to recommendations: R1, R2.

The Sonora City Council is requested to respond to recommendations: R2.

Reports issued by the Grand Jury do not identify individuals interviewed. Penal Code section 929 requires that reports of the Grand Jury not contain the name of any person or facts leading to the identity of any person who provides information to the Grand Jury.
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